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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/493,390	06/11/2012	Keyvan Rafei	11-199-US	5817

98804 7590 01/23/2017
Reed Smith LLP
P.O. Box 488
Pittsburgh, PA 15230

EXAMINER

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ART UNIT	PAPER NUMBER
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3683

NOTIFICATION DATE	DELIVERY MODE
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01/23/2017

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KEYVAN RAFEI, ALEX TARANENKO,
SALEH AL-GHAFARI, DERAR ALI, and JENNIFER LOPATIN

Appeal 2015-001340¹
Application 13/493,390²
Technology Center 3600

Before HUBERT C. LORIN, NINA L. MEDLOCK, and
ROBERT J. SILVERMAN, *Administrative Patent Judges*.

MEDLOCK, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 1–30. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ Our decision references Appellants' Appeal Brief ("App. Br.," filed May 19, 2014) and Reply Brief ("Reply Br.," filed November 4, 2014), and the Examiner's Answer ("Ans.," mailed September 4, 2014), and Final Office Action ("Final Act.," mailed May 20, 2013).

² Appellants identify Geographic Services, Inc. as the real party in interest. App. Br. 1.

CLAIMED INVENTION

Appellants' claimed invention "relates to a system and method for determining the level of influence of a group of persons" (Spec. ¶ 2).

Claims 1, 11, and 21 are the independent claims on appeal. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A computer-implemented method executed by one or more computing devices for determining the level of influence of a group of persons, comprising:

determining, by at least one of the one or more computing devices, a level of influence score for at least one member of a group of persons based on biographical data corresponding to the at least one member of the group of persons;

aggregating, by at least one of the one or more computing devices, the level of influence scores for the at least one member of the group of persons; and

determining, by at least one of the one or more computing devices, a composite level of influence for the group of persons based on the aggregate level of influence score.

REJECTIONS

Claims 1–30 are rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter.

Claims 1–6, 11–16, and 21–26 are rejected under 35 U.S.C. § 103(a) as unpatentable over Christianson (US 2008/0140506 A1, pub. June 12, 2008) and Hom (US 2011/0307474 A1, pub. Dec. 15, 2011).

Claims 7–9, 17–19, and 27–29 are rejected under 35 U.S.C. § 103(a) as unpatentable over Christianson, Hom, and Keller (US 7,653,568 B2, iss. Jan. 26, 2010).

Claims 10, 20, and 30 are rejected under 35 U.S.C. § 103(a) as unpatentable over Christianson, Hom, and Work (US 2006/0042483 A1, pub. Mar. 2, 2006).

ANALYSIS

Non-Statutory Subject Matter

Under 35 U.S.C. § 101, an invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. The Supreme Court, however, has long interpreted § 101 to include an implicit exception: “[l]aws of nature, natural phenomena, and abstract ideas” are not patentable. *See, e.g., Alice Corp. Pty Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014).

The Supreme Court, in *Alice*, reiterated the two-step framework previously set forth in *Mayo Collaborative Services v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1300 (2012), “for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of these concepts.” *Alice Corp.*, 134 S. Ct. at 2355. The first step in that analysis is to “determine whether the claims at issue are directed to one of those patent-ineligible concepts,” *id.*, e.g., to an abstract idea. If the claims are not directed to an abstract idea, the inquiry ends. Otherwise, the inquiry proceeds to the second step where the elements of the claims are considered “individually and ‘as an ordered combination’” to determine whether there are additional elements that “‘transform the nature of the claim’ into a patent-eligible application.” *Alice Corp.*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1297).

The Court acknowledged in *Mayo*, that “all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena,

or abstract ideas.” *Mayo*, 132 S. Ct. at 1293. We, therefore, look to whether the claims focus on a specific means or method that improves the relevant technology or are instead directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery.

See Enfish, LLC v. Microsoft Corp., 822 F.3d 1327, 1336 (Fed. Cir. 2016).

In this regard, the Federal Circuit has instructed that claims are to be considered in their entirety to determine “whether their character as a whole is directed to excluded subject matter.” *McRO, Inc. v. Bandai Namco Games America, Inc.*, 837 F.3d 1299, 1312 (Fed. Cir. 2016) (quoting *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015)).

Appellants note that the Examiner has the initial burden of presenting a prima facie case of unpatentability, and assert that “[t]he Examiner did not meet this burden with respect to the Examiner’s application of the Abstract Idea Eligibility Test [as set forth in the PTO’s June 25, 2014 “Preliminary Examination Instructions in view of the Supreme Court Decision in *Alice Corporation Pty. Ltd. v. CLS Bank International, et al.*”] (Reply Br. 4).

Appellants argue that although the Examiner states that claims 1, 2, 5–10, 13–16, and 21–24 are directed to the abstract idea of “determination of levels of influence of a group,” the Examiner has not identified any abstract ideas for claims 3, 4, 11, 12, 18–20, and 25–30 and, therefore, has failed to present a prima facie case of patent ineligibility with respect to those claims (Reply Br. 5). In like fashion, Appellants further argue, with respect to Part 2 of the “Two-part Analysis for Abstract Ideas,”³ that the Examiner has

³ The PTO Preliminary Examination Instructions describe the two-part analysis set forth in *Mayo*: “**Part 1**: Determine whether the claim is

failed to establish a prima facie case of patent-ineligibility because the Examiner has not explained, “*for each and every claim, why none of the elements of that claim, considered individually and in combination, are ‘enough’ such that the claim amounts to significantly more than the abstract idea itself*” (*id.* at 6).

Appellants’ arguments are not persuasive at least because it is clear that the Examiner’s claim analysis, including the identification of the abstract idea, applies to all of claims 1–30, and not merely to some of the claims. For example, although the Examiner, in the Part 2 analysis, specifically refers to the “at least one of the one or more of the more computing devices” language that appears in independent method claim 1, the Examiner is explicit in explaining that “claims to a method and apparatus ‘comprising a computer for executing computer instructions’ and computer-readable medium which ‘stores a computer program for evaluating pattern-based constraints’ are held ineligible for the same reason, e.g., the generically-recited computers add nothing of substance to the underlying abstract idea” (Ans. 4). The Examiner also explicitly indicates that “[c]laims 2–30 are rejected based on the same rationale, wherein the claim language does not recite ‘significantly more’ than the abstract idea” (*id.* at 5).

Turning to the framework set forth in *Alice*, and as the first step of that analysis, we agree with the Examiner that claims 1–30 are directed to

directed to an abstract idea”; **Part 2**: If an abstract idea is present in the claim, determine whether any element, or combination of elements in the claim is sufficient to ensure that the claims amounts to **significantly more** than the abstract idea itself.”

the abstract idea of determining the level of influence of a group of persons. Claim 1, for example, recites a method comprising (1) determining a level of influence score for at least one member of a group of persons based on biographical data; (2) aggregating the level of influence scores for the at least one member of the group; and (3) determining a composite level of influence for the group of persons based on the aggregate level of influence scores. Claim 1 recites that these steps are performed by “at least one of one or more computing devices.” Yet the steps, at best, involve no more than abstract mathematical concepts that could be performed in the human mind, or by a human using a pen and paper, without the need of any computer or other machine. “A method that can be performed by human thought alone is merely an abstract idea and is not patent-eligible under § 101.” *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372–73 (Fed. Cir. 2011); *see also Gottschalk v. Benson*, 409 U.S. 63, 67 (1972) (“[p]henomena of nature . . . , mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work.”). Moreover, mental processes remain unpatentable even when automated to reduce the burden on the user of what once could have been done with pen and paper. *CyberSource*, 654 F.3d at 1375 (“That purely mental processes can be unpatentable, even when performed by a computer, was precisely the holding of the Supreme Court in *Gottschalk v. Benson*.”).

Appellants assert that many of the dependent claims, for example, dependent claim 7, include elements that are not a mere instruction to apply the abstract idea (Reply Br. 7). Yet claim 7 merely specifies further processing, i.e., determining the level of influence score for the at least one member of the group of people utilizing a spatial score parameter in

conjunction with the biographical data, which again is an abstract concept that could be performed in the human mind, or by a human using a pen and paper.

Appellants note that the Supreme Court has characterized abstract ideas as basic tools of scientific and technological work, building blocks of human ingenuity, fundamental economic practices long prevalent in our system of commerce, building blocks of the modern economy, and well-known concepts (*id.* at 8). And Appellants assert that “[d]etermination of levels of influence of a group’ does not fall into any of these categories” (*id.*). Yet we are aware of no precedent, nor for that matter do Appellants identify any precedent, that holds that only these enumerated categories can qualify as abstract ideas. Even were that not so, it clearly is well-known in any undertaking, and particularly in business ventures, to identify and communicate with individuals and groups who are in a position to exercise influence in the relevant arena — indeed, Appellants, in the Background section of the Specification, concede as much (*see* Spec. ¶ 3 (disclosing that in conducting business operations, a failure to recognize and communicate with those who wield influence can lead to disastrous consequences)).

Turning to the second step of the *Alice* analysis, Appellants argue that even if the pending claims are directed to the abstract idea of “determination of levels of influence of a group,” the claims recite significantly more than the abstract idea itself (Reply Br. 8–10). Appellants restate the limitations of claims 1, 3, 4, 7, 11, 13, 14, 17, 21, 23, 24, and assert that these limitations add significantly more to the claim (*id.* at 8–9). Yet these limitations are merely part of the abstract idea, i.e., they further characterize the nature of the level of influence score and/or the information used in determining the

score. The only claim elements beyond the abstract idea are directed to the system (including computing devices, processors, and memories) on which the method of determining levels of influence is performed. Considered as an ordered combination, these computer components add nothing that is not already present when the steps of the method are considered separately. The claims do not, for example, purport to improve the functioning of the computer itself. Nor do they effect an improvement in any other technology or technical field. Instead, the claims amount to nothing significantly more than an instruction to apply the abstract idea of determining levels of influence using a generic computer, which is not enough to transform an abstract idea into a patent-eligible invention. *See Alice Corp.*, 134 S. Ct. at 2360.

Finally, we are not persuaded of error on the part of the Examiner by Appellants' argument that there are "countless methods and systems for 'determination of levels of influence of a group,'" and that the claims do not preempt any use of a fundamental concept (Reply Br. 9–10).

Although the Supreme Court has described "the concern that drives this exclusionary principle [i.e., the exclusion of abstract ideas from patent eligible subject matter] as one of pre-emption," *Alice*, 134 S. Ct. at 2354, characterizing pre-emption as a driving concern for patent eligibility is not the same as characterizing pre-emption as the sole test for patent eligibility. "The Supreme Court has made clear that the principle of preemption is the basis for the judicial exceptions to patentability" and "[f]or this reason, questions on preemption are inherent in and resolved by the § 101 analysis." *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015) (citing *Alice*, 134 S. Ct. at 2354). Although "preemption may signal

patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility.” *Id.*

We are not persuaded that the Examiner erred in rejecting claims 1–30 under 35 U.S.C. § 101. Therefore, we sustain the Examiner’s rejection.

Obviousness

Independent Claim 1 and Dependent Claims 2–6

We are persuaded by Appellants’ argument that the Examiner erred in rejecting independent claim 1 under 35 U.S.C. § 103(a) because Christianson, on which the Examiner relies, does not disclose or suggest “determining . . . a level of influence score for at least one member of a group of persons . . . [and] aggregating . . . the level of influence scores for the at least one member of the group of persons,” as recited in claim 1 (App. Br. 5–8; *see also* Reply Br. 11–13).

Christianson is directed to “[s]ystems and methods for the identification, recruitment, enrollment, and scoring of influential members of social groups” (Christianson, Abstract; *see also id.* ¶ 7), and discloses that one or more initial influencer trait scores are computed for a potential influencer (*id.* ¶ 8).⁴ Based on these scores, the potential influencer is rejected or enrolled as an influencer (*id.*). After an influencer is enrolled,

⁴ An influencer trait score is described as a quantification of the degree an influencer possess a given influencer trait (e.g., (1) longevity, or an indication of how long the influencer has been enrolled as an influencer; (2) recency, or an indication of how recently the influencer has performed a significant activity; (3) participation, or an indication of how often the influencer participates in influencer activities (i.e., marketing campaign events); and (4) diffusion, or an indication of how well the influencer relays information to other members of the influencer's social group), as compared to the other members of the social group (Christianson ¶ 22).

one or more of the influencer's initial influencer trait scores may be validated or refined by inviting the influencer to participate in an actual or artificially created marketing campaign (*id.* ¶¶ 9–10). An event server monitors event activity and provides this information to the scoring engine; influencer trait scores associated with the influencer are then validated or refined based on information observed or derived from the influencer event activity (*id.* ¶ 10). In one embodiment, an event table stores information regarding every activity or interaction in which an influencer has participated, including, for each event, a participation influencer trait increment score (*id.* ¶ 57). Christianson discloses that some influencer trait scores may simply be the sum of all of the increment score values associated with the events the influencer has participated in (*id.*).

In rejecting claim 1 under 35 U.S.C. § 103(a), the Examiner equates the claimed “level of influence score” to Christianson's influencer trait score (Final Act. 14–15). And the Examiner cites paragraph 57 of Christianson as disclosing “aggregating” the level of influence scores, specifically noting that “some influencer trait scores may simply be the sum of all of the increment score values associated with events the influencer has generated” (*id.* at 15).

One difficulty with the Examiner's analysis is that it is internally inconsistent. As Appellants observe, the Examiner first maps the level of influence score in the first limitation of claim 1 to Christianson's influence trait score; then, when addressing the second claim limitation, i.e., aggregating the level of influence scores, the Examiner identifies the increment score value of Christianson, which is a completely different quantity (App. Br. 6).

Moreover, even putting aside this inconsistency, it is clear from a fair reading of paragraph 57 of Christianson that the increment scores that Christianson describes are aggregated are “associated with,” i.e., are influence scores for, a particular event, not a particular individual. As such, the increment score cannot reasonably be interpreted as “a level of influence score for at least one member of a group of persons” (*see id.*).

The Examiner additionally cites paragraph 22 of Christianson as disclosing “aggregating . . . the level of influence scores for the at least one member of the group of persons” (Final Act. 15), noting that Christianson discusses “that influencer trait scores may include relative scores (e.g., scores relative to other members of the influencer’s social group or groups-- e.g., percentile or decile values), absolute scores, or composite scores (*id.*). It is not at all clear which portion of the paragraph the Examiner consider relevant to the claim language. However, to the extent the Examiner equates Christianson’s composite scores to “aggregating . . . the level of influence scores,” Christianson discloses that the composite scores are concatenations of different influencer trait scores presented in the form of a 3- or 4-digit score (*see* Christianson ¶ 86 (disclosing that “Composite scores RPD (recency, participation, and diffusion) and RPDL (recency, participation, diffusion, and longevity) may be defined as 3-digit or 4-digit scores, with each digit of the composite score representing a different influencer trait score. For example, the RPDL composite score ‘9876’ may represent an influencer with a recency score of 9, a participation score of 8, a diffusion score of 7, and a longevity score of 6.”)).

In view of the foregoing, we do not sustain the Examiner’s rejection of independent claim 1 under 35 U.S.C. § 103(a). For the same reasons, we

also do not sustain the Examiner's rejection of dependent claims 2–6.

Cf. In re Fritch, 972 F.2d 1260, 1266 (Fed. Cir. 1992) (“dependent claims are nonobvious if the independent claims from which they depend are nonobvious”).

Independent Claims 11 and 21 and Dependent Claims 12–16 and 22–26

Independent claims 11 and 21 include language substantially similar to the language of claim 1. Therefore, we do not sustain the Examiner's rejection under 35 U.S.C. § 103(a) of independent claims 11 and 21, and claims 12–16 and 22–26, which depend therefrom, for the same reasons set forth above with respect to claim 1.

Dependent Claims 7–10, 17–20, and 27–30

Claims 7–10, 17–20, and 27–30 depend from independent claims 1, 11, and 21, respectively. The Examiner's rejections of these dependent claims do not cure the deficiency in the Examiner's rejection of independent claims 1, 11, and 21. Therefore, we do not sustain the Examiner's rejection under 35 U.S.C. § 103(a) of claims 7–10, 17–20, and 27–30 for the same reasons set forth above with respect to the independent claims from which they respectively depend.

DECISION

The Examiner's rejection of claims 1–30 under 35 U.S. C. § 101 is affirmed.

The Examiner's rejections of claims 1–30 under 35 U.S. C. § 103 are reversed.

Appeal 2015-001340
Application 13/493,390

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED